

**POLLUTANT MINIMIZATION PROGRAM**

**Carrier Corporation — Thompson Road Facility  
Syracuse, New York**

**EnSafe Project No.: 0888805771**

**Prepared for:**



**Carrier Corporation  
Carrier Parkway  
Syracuse, New York**

**Prepared by:**



**EnSafe Inc.  
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**May 2008**

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**May 2008**

**Prepared by:**

May M. Heflin  
May Heflin, Sr. Engineer

**Reviewed by:**

Thomas Green  
Thomas Green, Project Manager

May 13, 2008  
Date

May 13, 2008  
Date

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## **1.0 INTRODUCTION**

### **Background**

This Pollutant Minimization Program (PMP) has been developed for the Carrier Corporation facility in Syracuse, New York as required by the Special Conditions listed in their State Pollutant Discharge Elimination System (SPDES) Permit (No.: NY 000 1163). The PMP is required because the calculated water quality based effluent limit (WQBEL) of 0.001 nanograms/liter (ng/L) for total polychlorinated biphenyls (PCBs) is below the permit limit (quantification level) of 300 ng/L per Aroclor using EPA Method 608.

Carrier is currently implementing a PCB Storm Water Quality Study (PSWS) in accordance with their SPDES permit. The PMP is a working document and may be modified as needed following the results of the PSWS. Additionally, the PMP plan will be modified whenever:

- (a) changes at the facility increase the potential for discharge of the PCBs
- (b) actual discharges indicate the plan is inadequate
- (c) a letter from the Department identifies inadequacies in the PMP plan
- (d) an annual assessment of the plan is performed, and modifications are indicated

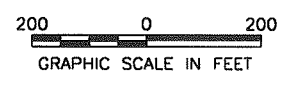
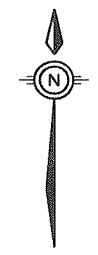
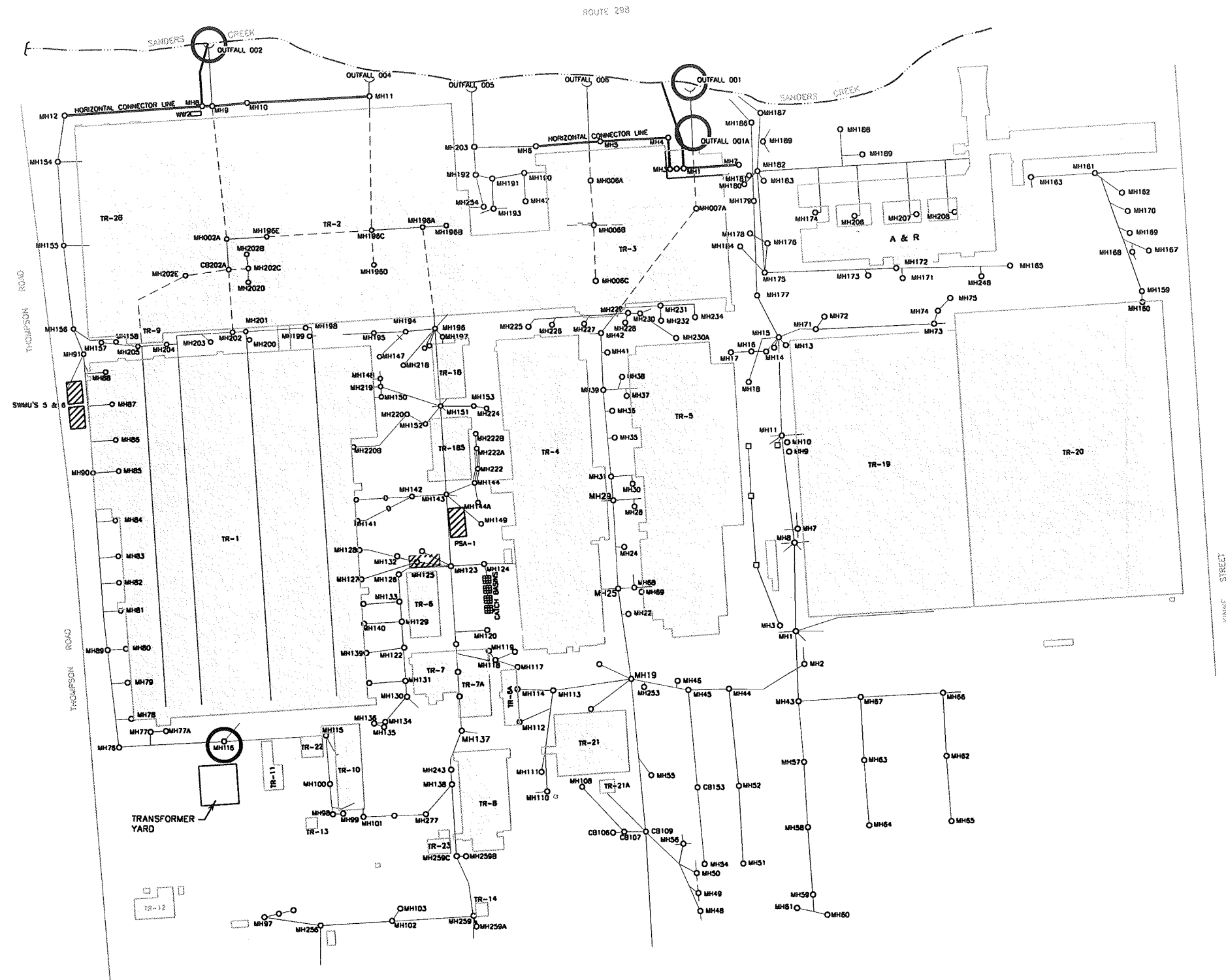
This plan will be maintained onsite at all times in the office of the Facilities Maintenance Services (FMS) Environmental Health and Safety (EHS) Manager.

The PMP includes the following elements which are discussed in more detail in subsequent sections of the plan:

- Potential Source Identification, Evaluation, and Prioritization Program
- Periodic Monitoring
- Schedule for Submission of PCB Control Strategy
- Treatment System Operation
- Report Submittals

## **2.0 POTENTIAL SOURCE IDENTIFICATION, EVALUATION & PRIORITIZATION PROGRAM**

As part of this PMP, Carrier has developed a program that identifies potential sources of PCB contamination, provides an approach for evaluating potential PCB sources, and prioritizes the containment, remediation, or treatment of the sources if a determination is made that it is contributing to storm water effluent from the Carrier facility.



LEGEND

TR-2	BUILDING
	STORM SEWER AND SIZE

SOURCE:  
**PHILLIPS & ASSOCIATES**  
 SURVEYORS, P.C.  
 LIVERPOOL, NEW YORK  
 (FILE 2700.001)

**ENSAFE**  
 (800) 588-7943  
 MEMPHIS, TENNESSEE  
 ARIZONA FLORIDA KENTUCKY MICHIGAN MISSISSIPPI  
 OHIO TENNESSEE TEXAS SOUTH CAROLINA  
 VIRGINIA WISCONSIN

PMP SW SAMPLING LOCATIONS  
 CARRIER CORPORATION  
 SYRACUSE, NEW YORK

### **Potential Source(s) Identification**

Carrier has identified the Transformer Yard as a potential source of PCB contamination in storm water runoff. The Transformer Yard has been identified in Corrective Action Order 7-20051118-4 (Order) which governs Corrective Action activities at this Carrier facility. Based on a review of site operations and history, the Transformer Yard (Area of Concern D in Table 1 of the Order) was identified as the location of PCB releases to the storm water system. Additional information on the Transformer Yard and subsequent actions including sampling and remedial measures is presented in Carrier's *Corrective Measures Study Report, May 2003*.

### **Potential Source Evaluation**

Carrier is currently working with New York State Department of Environment and Conservation (NYSDEC) to evaluate PCBs in storm water effluent as part of the SPDES permit issued to Carrier on September 14, 2007, from NYSDEC, Division of Environmental Permits, Region 7. Specifically, Carrier is in the process of developing and implementing a **PCB Storm Water Quality Study (PSWS)** in an effort to gather information for the design of an end-of-pipe PCB treatment system. As part of the study, storm water samples are being taken at select locations along the storm water lines contributing to discharges at Outfalls 001, 01A (post-treatment discharge) and 002, as well at each of the Outfalls and an upstream weir. A PSWS report is scheduled for submittal to NYSDEC in November 2008. The report will detail the findings of the study and the PMP may be modified based on PSWS determinations.

As discussed in Section 3.0 below, Carrier will be monitoring manhole MH-116 for migration of PCBs from the Transformer Yard — a potential PCB source.

### **Potential Source Prioritization Program**

While Carrier has identified the Transformer Yard as a potential source for PCB contamination, the results of the PSWS will ultimately determine how PCB contamination in storm water runoff is addressed (prioritized). As such, this section of the PMP will be updated pending issuance of the PSWS report.

Carrier has also prepared a Best Management Practices (BMP) program that will prevent and/or minimize the potential for pollutants to enter the storm water sewer system via storm water runoff. Details of the BMP program are outlined in Carrier's *Best Management Practices Plan, April 2008*, which was approved by NYSDEC on April 15, 2008.

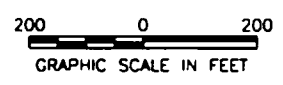
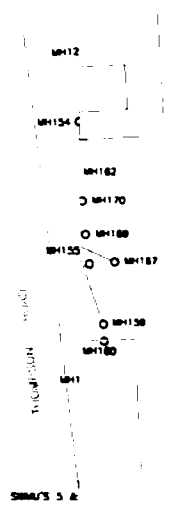
### **3.0 PERIODIC MONITORING**

Upon approval of this PMP, Carrier will begin collecting quarterly samples at the following locations (**Figure 1 – Influent/Effluent/Outfall Sampling Locations**):

- Outfall/Wet Well 001 — storm water runoff from this location represents wastewater treatment system influent and overflow to 001
- Outfall/Wet Well 002 — storm water runoff from this location represents wastewater treatment system influent and overflow to 002
- Outfall/01A — discharges from this location represent post-treatment effluent discharge
- Manhole MH-116 — As mentioned in Section 2.0, Carrier has identified the Transformer Yard as a potential source of PCB contamination in storm water. In accordance with 5.B.2 of the permit which requires monitoring of potential PCB sources, Carrier will obtain storm water samples from this manhole quarterly for the first year, and semi-annually thereafter.

The storm water samples at these locations will be analyzed using EPA Method 1668A or its Green Bay Method equivalent, which was approved for use in a letter from NYSDEC dated February 26, 2008. This sampling will be coordinated with the routine EPA Method 608 storm water compliance monitoring (DMRs) at the outfalls. Table 1 summarizes the proposed sampling schedule.

E -



PMP SW SAMPLING LOCATIONS  
CARRIER CORPORATION  
SYRACUSE, NEW YORK

DWG DATE: 28APR08 DWG NAME: 805771R002

FOIL074666



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**Table 1**  
**PMP Monitoring Schedule**  
**Carrier Facility, Thompson Road, Syracuse, New York**  
**SPDES Permit Number NY 000 1163**

			<b>Influent/Effluent/Outfalls</b>		<b>Potential PCB Sources</b>	
			<b>EPA Method 608</b>	<b>Green Bay Method</b>	<b>EPA Method 608</b>	<b>Green Bay Method</b>
NYSDEC PMP Approval - Begin PMP monitoring	4 <sup>th</sup> Quarter 2008	October	x	x	x	x
		November				
		December				
	1 <sup>st</sup> Quarter 2009	January	x	x	x	x
		February				
		March				
	2 <sup>nd</sup> Quarter 2009	April	x	x	x	x
		May				
		June				
	3 <sup>rd</sup> Quarter 2009	July	x	x	x	x
		August				
		September				
	4 <sup>th</sup> Quarter 2009	October	x	x	Begin semi-annual source monitoring	
		November				
		December				
	1 <sup>st</sup> Quarter 2010	January	x	x	x	x
		February				
		March				
	2 <sup>nd</sup> Quarter 2010	April	x	x		
		May				
		June				
	3 <sup>rd</sup> Quarter 2010	July	x	x	x	x
		August				
		September				
	4 <sup>th</sup> Quarter 2010	October	x	x		
		November				
		December				

#### **4.0 SCHEDULE OF SUBMITTAL FOR PCB CONTROL STRATEGY**

The ultimate control strategy used to prevent PCBs from being discharged to Sanders Creek at concentrations above the effluent limitations in Carrier's SPDES permit will be determined after the data results from the PSWS have been received, reviewed, and evaluated. The control strategy may include a combination of site treatment/remediation and/or end-of-pipe storm water treatment. If treatment/remediation of sediments or soils is warranted, the design and construction of a treatment system may be re-evaluated with NYSDEC following a monitoring period to determine if the treatment/remediation action was effective.

However, at this time, Carrier believes that end-of-pipe storm water treatment for PCBs will be needed to meet the effluent limitations. Assuming this is the case, the schedule for submittal for a control strategy is as follows (as outlined in Carrier's SPDES permit):

- Submit a PSWS to NYSDEC not-later-than November 17, 2008
- Submit a design and construction report for a treatment system that will achieve compliance with the PCB effluent limitations and monitoring requirements in Carrier's SPDES permit not-later-than July 17, 2009
- Begin construction of treatment system within one month following NYSDEC-approval of design report
- Complete construction of approved treatment system within 9 months of NYSDEC approval of design report. Completion of construction, upon written notification by Carrier, may be automatically extended for an additional four months if warranted by inclement weather.

#### **5.0 TREATMENT SYSTEM OPERATION**

In 1990, the NYSDEC and Carrier entered into a Consent Order as a result of the TCE detections in storm water discharges from the facility. The current air stripping tower treatment system is designed to capture and treat VOC-contaminated groundwater that has infiltrated into the network of storm water collection lines. During rain events, storm water runoff entering the storm lines and mixing with infiltrated groundwater is also treated. The treatment system was not designed (nor is it able) to remove PCBs from storm water. After the planned PCB treatment system is constructed, the proposed monitoring at 001A will be used to assess the efficacy of the treatment system.



## **6.0 PMP REPORT SUBMITTALS**

An annual report will be prepared and submitted to the Regional Water Engineer and to the Bureau of Water Permits by February 1 of each year. The report will summarize PCB monitoring data using a specific format to be provided by the department as referenced in Section 5.B.5 of the permit, and will include the following elements:

- A mass balance comparison of influent, effluent, and sludge levels
- A list of known or potential PCB source
- Control measures implemented during the previous calendar year
- Monitoring, investigations, and control measures to be completed during the current calendar year
- Progress made toward achieving the PMP goal (meeting the WQBEL)